

REMARKS

Claim 13 has been amended and claims 18-22 have been cancelled as a result of this Response. Claim 1 is the sole independent claim.

DRAWING OBJECTION

The Examiner has objected to the drawings as failing to comply with 37 CFR § 1.84(p)(4) because reference character 14 has been used to designate both "a spacer chip" and "the outer ring". In response to this objection, Applicants respectfully submit that the spacer chip is one example of an outer ring.

In Fig. 1 the outer ring 14 is a soft magnetic metal ring (page 6, line 20) used to guide magnetic flux and to provide the necessary back volume. However, in the embodiment described in Fig. 2, the outer ring/spacer chip is a magnetic ring to provide the permanent magnet, and therefore no permanent magnets are positioned on both sides of the diaphragm, reference character 22 refers to a soft magnetic stamp to lengthen the core of the flux generator and define the gap to the membrane 23 (page 7, lines 1-2). In this embodiment it is more correct to use the term "outer ring" rather than "spacer chip" since the outer ring both provides for the necessary back volume *and* the permanent magnetic flux.

Applicants respectfully submit that basis is present for using both of the terms "spacer chip" and "outer ring" for the element referred to by reference character 14. In order to clarify the equivalence between the outer ring and the spacer chip, the Applicant proposes the following amendment to page 6, lines 20-22:

In figure 1 the outer ring, i.e. the spacer chip, 14 is a rectangular, O-shaped, soft magnetic metal ring [...].

In view of the above, reconsideration and withdrawal of the objection is respectfully requested.

35 U.S.C. § 112, SECOND PARAGRAPH REJECTION

Claims 13 has been rejected under 35 U.S.C. § 112, second paragraph. Applicants have amended claim 13 such that it is in compliance with 35 U.S.C. § 112, second paragraph.

35 U.S.C. § 102(B) PLICE ET AL. REJECTION

Claims 1-3, 7, and 11 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 4,000,381 to Plice et al. This rejection, insofar as it pertains to the presently pending claims, is respectfully traversed for the following reasons.

In formulating this rejection, the Examiner states that Plice et al. disclose all the features of claim 1, namely a miniature actuator, comprising: a first and second flux generator (56) for generating a first and second magnetic flux, a moveable diaphragm (34) positioned between the first and second flux generator (Fig. 1); and means for generating a permanent magnetic flux.

Applicants respectfully assert that independent claim 1 recites that the moveable diaphragm is positioned between the first and second flux generators and forms part of the magnetic flex path of the actuator. Applicants respectfully submit that Plice et al. does not disclose that the moveable diaphragm is positioned between the first and second flux generators. On the contrary, the diaphragm of Plice et al. is positioned at one side of the first and second flux generators. As a result, it is clear that the diaphragm 32 of Plice et al. does not form part of the magnetic flex path.

Accordingly, Applicants respectfully submit that independent claim 1 is allowable over Plice et al. for at least this reason. Applicants further respectfully submit that dependent claims 2-3, 7, and 11 are allowable over Place et al. for at least this reason.

35 U.S.C. § 103(A) REJECTION

Claims 4-5, 12, and 15-17 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Plice et al. Applicants respectfully submit that dependent claims 4-5, 12, and 15-17 are allowable by virtue of their dependency on allowable independent claim 1 for at least the reason set forth above. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

ALLOWABLE SUBJECT MATTER

Applicants acknowledge the Examiner's indication that claims 6, 8-10 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims.

CONCLUSION

In view of the above amendments and remarks, reconsideration of the various objections and rejections and allowance of claims 1-17 is respectfully requested.

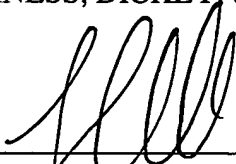
Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact John A. Castellano at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKEY & PIERCE, P.L.C.

By



John A. Castellano, Reg. No. 35,094
P.O. Box 8910
Reston, Virginia 20195
(703) 668-8000

JAC/cah